

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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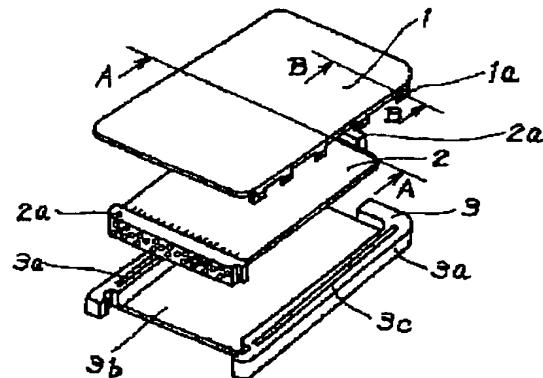
APPLICATION DATE : 06-12-93  
APPLICATION NUMBER : 05304950

APPLICANT : HITACHI ASAHI ELECTRON:KK;

INVENTOR : KAMEYAMA TAKAYUKI;

INT.CL. : G06K 19/00 G06K 19/07 G11C 5/00

TITLE : IC CARD



ABSTRACT : PURPOSE: To provide a IC card structure which is high in reliability to mechanical or thermal stress.

CONSTITUTION: This card is the IC card where a case 3 integrates a frame part 3a and a panel part 3b, and plural tongue pieces 1a which are provided on a panel 1 and have elasticity are force-fitted in the groove 3c of the case 3 and are restrained. By using the case 3 integrating the frame 3a and the panel 3b on one side and using a system where the tongue pieces 1a having elasticity are force-fitted and restrained for the coupling of the other side panel 1 and the case 3, parts control man-hour can be remarkably reduced and reliability to mechanical or thermal stress is improved. Further the recycling of material becomes possible because the disassembling is easy.

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# PATENT ABSTRACTS OF JAPAN

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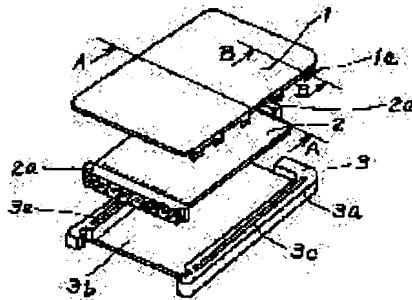
(21) Application number : 05-304950 (71) Applicant : HITACHI LTD  
 HITACHI ASAHI ELECTRON:KK  
 (22) Date of filing : 06. 12. 1993 (72) Inventor : SHIBATA TOSHIO  
 KAMEYAMA TAKAYUKI

## (54) IC CARD

### (57) Abstract:

**PURPOSE:** To provide a IC card structure which is high in reliability to mechanical or thermal stress.

**CONSTITUTION:** This card is the IC card where a case 3 integrates a frame part 3a and a panel part 3b, and plural tongue pieces 1a which are provided on a panel 1 and have elasticity are force-fitted in the groove 3c of the case 3 and are restrained. By using the case 3 integrating the frame 3a and the panel 3b on one side and using a system where the tongue pieces 1a having elasticity are force-fitted and restrained for the coupling of the other side panel 1 and the case 3, parts control man-hour can be remarkably reduced and reliability to mechanical or thermal stress is improved. Further the recycling of material becomes possible because the disassembling is easy.



## LEGAL STATUS

[Date of request for examination]

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[Date of final disposal for application]

[Patent number]

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examiner's decision of rejection]

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 2 308 505 A (MITSUBISHI ELECTRIC CORP) 25 June 1997 (1997-06-25) * page 30, line 15 - page 38, line 16; figures 2,7,14-22 *	1,3-11	G06K19/077 H05K7/14 H05K5/02
Y	---	2	
Y	US 5 673 181 A (HSU FU-YU) 30 September 1997 (1997-09-30) * column 2, line 34 - line 67 * * column 3, line 12 - line 24 * * figures 3,6,7 *	2	
A	---	1,3,4,8, 11	
A	US 5 879 170 A (NOGAMI DAISUKE) 9 March 1999 (1999-03-09) * column 2, line 65 - column 3, line 20 * * column 3, line 35 - line 52 * * column 4, line 1 - line 16 * * figures 2-7 *	1,3-5, 7-11	
A	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 09, 31 October 1995 (1995-10-31) & JP 07 160837 A (HITACHI LTD; OTHERS: 01), 23 June 1995 (1995-06-23) * abstract *	1-5,7,11	TECHNICAL FIELDS SEARCHED (Int.Cl.7) G06K H05K
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The present search report has been drawn up for all claims

1	Place of search	Date of completion of the search	Examiner
	THE HAGUE	10 August 2001	Bhalodia, A
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 10 7544

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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10-08-2001

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